Richmond Refinery LPS Alert – Safety

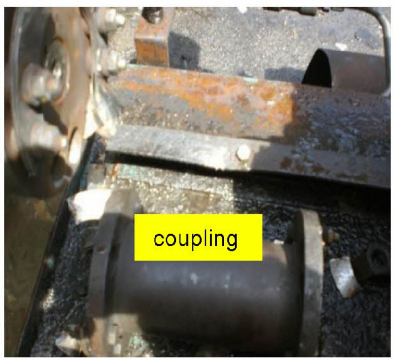
Motor Pump Set Coupling Disengages

IPS Control: NLI #1895092

Location:
MP 241A Motor Pump Set
FCC Business Unit

Contact Information:
Karla Salomon
510-242-2788
KAJL@chevron.com

Pump (Left), power transmission coupling (center), and motor (right).



Power transmission coupling

Always remember to do your LPSA – because we care about you!

Incident Description:

On Wednesday, April 12th at 11:30 am, a Chevron operator had a near miss from a motor pump set at FCC.

An operator and machinery inspector were reviewing the vibration on a motor pump set. They had installed pressure gages on the inlet and outlet of the pump to determine where system vibration was coming from. They turned on the motor pump set and it was running for about 30 seconds when the power transmission coupling disengaged from the power transmission drive line, hit the frame, hit and removed the machine guarding shroud, and bounced back towards an operator. The 3-4 lb coupling glanced off the stomach of the operator. The operator was not directly in the line of fire when the motor was in operation but was close enough that the coupling grazed the operator (although no injury was sustained).

Chevron Fire Department responded to the potential injury and evaluated the condition of the operator. It was concluded there were no medical issues for the operator. The motor/pump set was locked out immediately.

A Near Loss Investigation is in progress.

Immediate Actions Taken:

1) Failure mode of the coupling is being evaluated. Once the failure mode is determined, evaluation of other similar machines may be in order.
2) Best Practices:
   - A) When vibration, noise, or heat issues (5 senses!) occur on a motor pump set they shall be shut down immediately to ensure couplings/shims keep integrity (this had been done).
   - B) When Maintenance/IMI comes out to re-start the suspect equipment, shims and couplings must be visually inspected. This may mean temporary removal of the guard or a visual inspection through a screen. After the inspection, ensure coupling machine guards are attached to the base plate at all available points before starting equipment. (Remember, the guards will not stop the coupling but reduce its energy only).
   - C) Always be aware of the line of fire. Do not stand next to rotating equipment when starting it. In this case the operator was standing back from the coupling (a distance buffer), but not completely out of the line of fine. The shims did not come apart until 30 seconds into the run.